

Addendum 1: TCEQ Analysis of ITC Water Quality Sampling Data

The TCEQ previously reported its analysis of preliminary surface water quality data and 9 constituents were still pending further TCEQ evaluation at that time. The TCEQ has completed its review of the 9 constituents. This TCEQ analysis is an addendum to the original TCEQ Analysis of ITC Water Quality Sampling Data.

The Texas Commission on Environmental Quality (TCEQ) assessed water quality data for 117 constituents at one site. Three samples were collected on March 19, 2019 by Intercontinental Terminal Company (ITC). The constituents consist of inorganics, organics, chemical oxygen demand (COD), and oil and grease. The sampling site was the following:

- Gate 13 Ditch

This assessment is based on preliminary laboratory results. As sample results are received, or additional water quality sampling is completed, the data will be assessed, and results made available.

The TCEQ used the Texas Water Quality Standards and the Texas Risk Reduction Program as references for determining the known health protective concentration levels (PCLs) in surface water. For 8 of the 9 constituents, the TCEQ used Texas Risk Reduction Program as reference for determining the PCLs in surface water. PCLs are very conservative and below levels where we would expect any health impacts. The TCEQ is using these PCLs to evaluate impacts to aquatic life and human health. No public drinking water system draws its source water from the Houston Ship Channel. This methodology was also used for previously reviewed data from samples collected by ITC. The TCEQ used the PCLs in the tables below to assess the surface water quality data.

Table 1. Assessment of Laboratory Results

	Gate 13 Ditch at 12:40 AM	Gate 13 Ditch at 1:40 AM	Gate 13 Ditch at 2:40 AM
Number of Constituents	117	117	117
Number of constituents analyzed but not detected (not detected above the method detection limit or quantitation limit)	97	96	100
Number of constituents detected above the method detection limit or quantitation limit	20	21	17
Number of constituents detected but below their known PCLs	8	10	9
Number of constituents that exceeded their known PCLs	12	11	8
Number of constituents that are still pending further TCEQ evaluation	0	0	0

Below are tables of constituents that exceeded their known PCLs at each of the sampling times.

Table 2. Summary of Constituents Exceeding PCLs for 12:40 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
2-Methylnaphthalene	33	30
Anthracene	8.1	0.18
Benzene	6700	581
COD	1580000	150000*
Ethylbenzene	9400	1867
Fluoranthene	12	2.96
m,p-Xylene	61000	24000
Oil and Grease	71700	28000
Phenanthrene	22	4.6
Pyrene	12	0.24
Toluene	4600	1000
Xylenes, Total	85000	850

Table 3. Summary of Constituents Exceeding PCLs for 1:40 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Anthracene	6	0.18
Benzene	6700	581
COD	1380000	150000*
Ethylbenzene	9700	1867
Fluoranthene	9.7	2.96
m,p-Xylene	58000	24000
Oil and Grease	179000	28000
Phenanthrene	18	4.6
Pyrene	11	0.24
Toluene	4700	1000
Xylenes, Total	81000	850

Table 4. Summary of Constituents Exceeding PCLs for 2:40 AM Sample

Constituent	Maximum (micrograms/L)	PCL (micrograms/L)
Benzene	9400	581
COD	1880000	150000*
Fluoranthene	5.2	2.96
Oil and Grease	198000	28000
Phenanthrene	7.3	4.6
Pyrene	5.9	0.24
Toluene	2400	1000
Xylenes, Total	4800	850

Footnote:

*COD is a measure of the oxygen demand exerted by chemical constituents in water. There was not a known PCL for COD, therefore the permitted technology-based limit was used for comparison purposes. Although COD levels for treated process wastewater vary 150000 micrograms/L for noncontact stormwater was provided for comparison purposes.